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Agricultural Education



These farmers of the future will know something about music, as every farmer should know.

This band, Centerville, Michigan, is made up entirely of boys enrolled in vocational agriculture. Incidentally, this school has won the Best Chapter Contest for the state two years in succession.

"By efficiency I mean effective power for work and service during a healthy and active life."—Charles W. Eliot.

EDITORIAL COMMENT

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SECRETARY WALLACE AND AGRICULTURAL EDUCATION

OUR readers are interested in the views of Secretary Wallace as they relate to agriculture itself and as they relate to the various agencies in agricultural education, particularly vocational education in agriculture.

Below is presented an excerpt from the speech of the Secretary at Cornell last August.

"The Smith-Hughes agricultural work in the high schools started in 1917 and is now more significant than any other type of agricultural education in certain communities, because of the hold which some of the more dynamic teachers have, not only on the boys, but also through the evening schools on the farmers direct. Last year the Smith-Hughes teachers reached 130,000 high school boys in the regular agricultural classes and 80,000 farmers in the evening classes, and the cost to the Federal government for their half of the expense was only about three million dollars."

Other statements in his speech indicate that Secretary Wallace is a strong believer in vocational agriculture.

It may be well for us, as teachers of vocational agriculture, to notice that the Secretary speaks of "dynamic teachers." Our dictionary defines dynamic as efficient; causal; producing or involving action. How many of us qualify as dynamic teachers? How many of us have a "hold" on the boys and "through the evening schools on the farmers direct?" The man who is just a classroom teacher is certainly not a dynamic teacher. He is not producing or involving action; he is not the cause of things worth while; he is not an efficient agent. The work of the dynamic teacher is of great significance to the community. The man who is just a classroom teacher does not have much influence upon his community, his boys, or the farmers direct—he is not dynamic.—C. H.

A PICTURE OF PROGRESS

WHAT is the most striking picture of progress in education you have seen within the past twelve months? Here is mine. It was set in an agricultural classroom in a rural high school in Eastern Virginia. I had known the teacher for a number of years, and although a fine likeable fellow, he had not succeeded at all well as a teacher. He had the unfortunate faculty of muddling issues and losing his sense of direction whenever leading group discussion.

Imagine my surprise when I walked quietly into his classroom and saw about twenty boys busily engaged in groups at various tables. The instructor was busy with one group outlining a plan for studying "How to purchase our baby chicks." Other groups were busy with various

farm problems of which I remember two: "Providing brooding quarters" and "Determining how much acreage should be planted in peanuts". What a contrast with the picture I had anticipated. Every boy was busy—no desk whittling, day dreaming, and mental asphyxiation. Not a single opportunity presented itself for disciplinary attention, in comparison with the continuous reprimanding of which the instructor had been guilty. No noisy confusion as of old. It was a delightful picture.

One detail is lacking. Over in a corner a young man seemed to be occupied with a drawing board, drawing utensils, and some magazines. My inquisitiveness had to be satisfied. And what did I find? Here was a young man with a craving for drawing. He wanted to be a magazine illustrator—to draw illustrations, cover designs, and advertisements. The small school could offer no formal instruction, but some wise teacher or principal had helped the boy to enroll in a correspondence course. He was happy. He was not an agricultural pupil. The quarters and atmosphere of this room made it a desirable working place. In one instance, the school had at least gotten out of the way of pupil initiative and perhaps had even encouraged it.

This picture stands out at the end of twelve months as the most encouraging sign of progress I have seen in a long time. It was a living demonstration of individualizing instruction to meet the needs and desires of the individual. I wonder if our present classroom, the deluge of facts upon facts, bells to study this and to quit that, and a too-evident teacher, won't sometime change. And, instead, the classroom will be a workroom, with the students informally comfortable, where subjects will not be considered sacred, bells will not ring, and the teacher will be evident only as a much desired helper and inspirer.—E.C.M.

EDUCATION THE SAFEST INVESTMENT

WARREN and Pearson in their new book *Prices* list education as the safest of all investments. We quote:

"The safest investment is education. This is the only investment that has any assurance of stability for a lifetime. For most persons, education of the children is a greater safeguard for their own protection in old age than any other investment they are likely to make.

"The next safest investment is life insurance for dependents and an annuity policy for one's self.

"If the family plans to live in one place, a farm or home is the next best investment. Until it is completely paid for, investments in stocks and bonds usually are not advisable."—C. H.

EINSTEIN AND VOCATIONAL EDUCATION

NOW comes Albert Einstein as an advocate of vocational education as required subjects for every student in the curricula of our schools. His reasons are most interesting. Not alone for the benefits to be derived by the forgotten 92 per cent in the shape of specific trade knowledge and skills does he see value, but also in the broader base in the fundamentals it provides for those pursuing advanced studies. This latter reason is quite unique and furnishes still another justification for a vocational education program.—Nevada Reflector.

PROFANITY

CAN we tolerate profanity in the school? In the locker rooms, on the athletic field, in the halls, and on the streets we are confronted with its use in many variations. What respect can boys have for the teacher in later years who tolerates profanity or obscure language?

Are we training boys to weld iron, forge chisels, file saws, or repair harness for the sake of the task alone, or are we trying to build character and shape these lives into more decent and respected citizens?—C. B. Campbell, River Falls, Wisconsin.



Professional



Charles William Eliot, The Educator A Teacher by Choice

JOHN T. WHEELER, Professor of Rural Education, University of Georgia

CHARLES WILLIAM ELIOT (1834-1926), is fittingly called a great educator. It would be hard to find another leader in American education whose influence extended over so long a time or over so wide a field as that of Dr. Eliot. In 1869 he stirred the educational world with his article on "The New Education", and today "There is in America no educator, be he college president, professor, school principal, teacher, or humble assistant, whose work has not been directly influenced by him; every college student, every child at school feels his shaping hand; every textbook has been revised by the standards he has compelled."¹

Charles W. Eliot at the age of twenty, deliberately selected teaching as a career. This choice did not meet with full approval from his father, Samuel A. Eliot. Charles was the only son. His father was, at that time (1853), a wealthy and influential man of Boston and New England; and he urged upon Charles "that a man of affairs could hope for a larger sphere of influence and therefore a better prospect of usefulness than a teacher."

The first year after being graduated from Harvard, Charles remained at home and wrestled with the problem: "What shall I be?" During that year (1853-1854) he wrote to a friend: "What a tremendous question it is. When a man answers that question, he not only determines his sphere of usefulness in this world, he also decides in what direction his own mind shall be developed. If I join the firm, I shall be an entirely different man 50 years hence from what I should have been had I gone into Cooke's (chemistry) laboratory, instead of the counting room." Then he adds a concluding statement that sounds very modern: "Now it seems to me that very few young men have the requisite data for an intelligent decision of the above question." Charles Eliot set about getting the necessary data in order to decide this "tremendous question." During his year at home he studied business at the request of his father and taught school because he wanted to. This point in his life is worthy of further study.

During the winter of 1854, young Eliot began teaching in the Pitts Street School in Boston. At this school he organized a night class for boys and men. What he taught, we do not know, but we may guess from the lines of a letter he wrote in January, 1854: "When I began to write this letter," he said,

"I could not feel my pen at all, for I had just come in. . . and my hand was numb; I felt as many of the Pitts Street boys feel, in whose hands the pens are as unmanageable as a darning needle would be in ours." We do not know what he taught in those evening classes nearly eighty years ago, but we do know he taught and liked it. Before the winter ended, he penned these significant statements: "One thing I am clear about, I do like teaching—the pleasantest evenings for me

do not involve a comparison between the profession of (teaching) and any other calling. . . The only questions which I need to discuss are these: 1st is the profession a useful one, and, 2nd could I be happy therein?"

In answer to the first question he points out: "The very maintenance of our free institutions depends on the education of the people. Surely he holds an honorable and responsible post, who labors in the cause of education. A distinguished teacher, whose precepts impart the truth, which his example makes attractive, who has control over the standard of education in the community, and who moreover sets a high example of scholastic attainments, is a man of influence, of reputation, and of usefulness. A successful teacher is a good and useful citizen. He who teaches men a fact or principle which men never knew before, who adds something, small or great, to the sum of human knowledge, does good. There is no such thing as useless truth."

To answer the second question he wrote: "I would enjoy the life of a teacher because I like to teach. I like to understand a subject with that thoroughness and precision which are indispensable in a teacher. I like to keep my own ideas so clear that others can see them." Further he said: "The scholar lives on a high intellectual level; it is his profession to improve himself in order that he may the better instruct others. This is an important point to me because I believe that 'a steady regard in the conduct of life to the happiness and perfection of our own nature, and a diligent study of the means by which these ends may be attained' are among the most important and comprehensive of our duties to ourselves."

As a teacher, Eliot began at the bottom and worked up. He became tutor of mathematics in Harvard College in 1854. In the spring of 1858 he was promoted to assistant professor of mathematics and chemistry. In July 1861 he was placed in charge of the Lawrence Scientific School at Harvard, and from that time until he left the faculty of Harvard College in 1863, he gave his entire attention to teaching chemistry.

After two years of study in Europe (1863-1865) Eliot was confronted again by the business world. He was offered an attractive position as superintendent of the Merrimac Mills, but turned it aside. His reasons being that "It would be both foolish and cowardly to cast aside eleven years of preparation for teaching" to enter another field. Soon after he had refused the Merrimac



Charles William Eliot, the Teacher, 1906.

are Pitts Street nights." Here we find the deciding factor—teaching evening classes in the Pitts Street School—that "fixed the direction" of Charles William Eliot's career.

His experience at the Pitts Street School brought the decision to become a teacher. Charles wrote a letter to his mother (March 1854) breaking the news of his decision. He wrote: "The pith of all the thought which I have given to the subject for the past year and a half can be given in answer to two questions. . . These questions

Mr. Wheeler is peculiarly fitted in training and personal association with Dr. Eliot to be the author of this number of the series on contributions to education. During the spring and summer of 1917, Mr. Wheeler was associated with Dr. Eliot in a war emergency project. On several occasions he appeared on the same public program with Dr. Eliot. This great teacher by choice practiced what he preached in promoting food production. He grew vegetables in his yard, and plowed, harrowed, manured, and planted with his own hands.—Editor.

1. Atlantic Monthly (February and March, 1869).

offer, the president of the newly founded Massachusetts Institute of Technology invited Eliot to become professor of chemistry at that institution. This offer was accepted in August 1865. Although the salary was only \$2,000, he wrote: "I am quite content with this opportunity." Beyond the salary he saw opportunity in teaching chemistry the way he thought it should be taught.

Perhaps we should pause here to note how as an undergraduate at Harvard the study of chemistry gripped young Eliot's interest, and how the working out of that interest colored much of the educational philosophy that he later held. The opportunities for studying chemistry were very meager when Eliot was a student at Harvard. He found access to the private laboratory of Professor Cooke, and spent much of his spare time in that chemical workshop. With Cooke's help he also set up a laboratory in an attic room at his parents' Boston home. During vacations he studied in this improvised laboratory or took what he called geological and mineralogical "touts" with Professor Cooke and his assistant, Mr. Storer. There is much evidence to warrant the assertion that out of his own difficulties as a student in finding studies suited to his interests and aptitudes grew Eliot's philosophy of curriculum revision and the development of the elective system at Harvard, for which he is renowned.

The New Education

Up to the time Charles Eliot became a teacher of chemistry at the Massachusetts Institute of Technology (1865), he was an obscure "professor." Two years later, Eliot and Storer's *Manual of Chemistry* appeared. It set a standard for laboratory work in chemistry for schools and colleges throughout the English speaking nations. Then came his "New Education" in the *Atlantic Monthly* of February 1869, which immediately drew the attention of the entire educational world. It was revolutionary and prophetic. This article was written when the Land Grant Colleges were being born, and it reveals the guiding principles that have so largely formulated the educational policies of our national system of higher education. Eliot pointed the way in the Atlantic articles to "required studies of the first and second years, and certain general studies in the third and fourth years" and he advocated, at the beginning of the third year, "each student should select a major field of specialization." In Eliot's "New Education" one can discover the present pattern of American universities and colleges.

Further, "The New Education" set forth the "need for broadening and deepening the course of study in the schools which receive the American boy from ten to seventeen." These needs were set out specifically by Eliot in the *Atlantic Monthly* of March 1869. The needs as then indicated by him have been incorporated into the program of college preparation that holds throughout the nation to this day. Do these not sound familiar?: (1) "The first thing which a child should study with patience and thoroughness is his native tongue; and this not through formal grammar. A child can drink in and

appreciate the beauties of a refined or noble style years before he can understand grammar or rhetoric." (2) "Latin with perhaps French," comes next, but "nobody ought to teach Latin to boys on the ground that it is indispensable to professional men. The vulgar argument that the study of the classics is necessary to 'make a gentleman' is beneath contempt." (3) "The second principal sub-division of studies proper to boyhood is the mathematics." (4) "The science which may be judiciously taught to boys under seventeen years of age is of less bulk and variety than is commonly imagined. Theoretical chemistry and physics are unsuited to the undeveloped mind of boyhood." (5) "There remains one other subject. . . namely, history. It is, however, as useless to learn a list of dates in history as of atomic weights in chemistry." These five groups of subjects have a familiar ring, and give us some idea of the strength and lasting power of the shaping hand of Dr. Eliot in American education below college grade.

At the very time of the publication of his contributions on "The New Education," Eliot was being considered as president of Harvard College by its Corporation and Board of Overseers (March 1869). Some there were on these controlling boards who opposed the election of Eliot on the grounds of the radical views on education expressed in the Atlantic articles. Still the challenge and confidence expressed in "The New Education" won for Charles W. Eliot the presidency of Harvard College and a lasting leadership in American educational thought.

As President of Harvard his prestige was greatly enhanced. Any one who reads his early writings, however, will be convinced that his vision and compelling clarity of expression in matters of education would have carried him far as an independent leader in educational reform. Combining these two elements—his personal abilities, and the prestige of his newly acquired position—Dr. Eliot sprang into meteoric prominence, and continued to dominate the educational firmament for more than a half century.

Reforms at Harvard

"The real history of Harvard begins not with its founding in 1636, but with Charles W. Eliot's inaugural address of October 19, 1869," says a recent writer in *Survey Graphic*: "Every part of Harvard College felt his force that day, and continuously thereafter during the forty years (1869-1909) that he remained its president." Growing out of his accumulated experience of fourteen years as a student and teacher at Harvard, President Eliot from the very first began to work out far-reaching reforms. Had these reforms applied to Harvard only they would have been notable, but they were destined to become a pattern in which a nation's program of higher education was to be moulded. Eliot's reforms toward "The New Education," therefore, have momentous significance.

In brief, the educational reforms at Harvard were carried toward three objectives: (1) a movement toward greater freedom for both student and teacher, (2) a movement toward better methods

of teaching, and (3) a movement toward the establishment of "professional standards."

1. The movement towards freedom for the individual student worked out in two directions: (1) by "removing petty restraints and childish disciplines," and (2) by inaugurating a wider range of electives. In the place of petty restraints he developed the idea of "personal responsibility and accountability." Eliot said: "Educational institutions should save men, not men save institutions." The elective system instituted at Harvard by Dr. Eliot grew out of his philosophy that "in education the individual traits of different minds have not been sufficiently attended to." As a student, Dr. Eliot felt the hampering hand of "prescribed courses and required textbooks." "Books," he said, "should be servants not masters," in the learning process.

Out of this philosophy of freedom for students to fit courses to their "individual traits" came a demand for a unified and enlarged university at Harvard. In his inaugural address, Dr. Eliot said: "The endless controversies whether language, philosophy, mathematics, or science supplies the best mental training, whether general education should be chiefly literary or chiefly scientific, have no real antagonism between literature and science, and consents to no such narrow alternatives as mathematics or classics, science or metaphysics. We would have them all and at their best."

2. In emphasizing the needs for the use of better methods in teaching, Dr. Eliot said: "It is not because of the limitation of their faculties that boys of eighteen come to college, having mastered nothing but a few score pages of Latin and Greek, and the bare elements of mathematics. Not nature, but an unintelligent system of instruction from the primary school through the college, is responsible for the fact that many college graduates have so inadequate a conception of what is meant by scientific observation, reasoning, and proof. It is possible for the young to get actual experience of the principal method of thought in language, and a method in mathematics, and another of natural physical science, and another of faith. With wise direction, even a child would drink at all these springs. The actual problem to be solved is not what to teach, but how to teach."

"With good methods," he concluded, "we may confidently hope to give young men of twenty to twenty-five an accurate general knowledge of all the main subjects of human interest, besides a minute and thorough knowledge of the one subject which each may select as his principal occupation in life. In every department of learning the university would search out by trial and reflection the best methods of instruction."

3. As a corollary to these reforms—freedom for the individual and better methods in teaching—Dr. Eliot pushed towards his third major objective, namely, "more definite standards of attainment," in all departments of his growing university. The professional schools at Harvard began at once to feel the pressure of this forward movement toward professional standards.

"In undertaking to train young men for the clerical, legal, medical, and scientific professions," Dr. Eliot said, "the university assumed grave responsibilities, which have not always been kept sufficiently in view. . . . In this country, where preparation for the learned professions, except the clerical, has been notoriously scanty, hasty, and unsystematic, it is especially important that the leading university should set an example of thoroughness."

The medical school received his first efforts. "Beyond the payment of a fee there were no requirements for admission to the medical school" when Eliot became president of Harvard. After much labor and resistance this was all changed, and the medical school at Harvard became the outstanding school of its kind in America. The law school, the divinity school, the Lawrence scientific school, the college of arts and sciences were forged by the steady, strong, and sympathetic hand of Dr. Eliot into a great university, bearing the highest standards of quality in every department.

Harvard College put a chemist in charge, and the reaction produced not only a great university out of a provincial college, but it produced also a national reformation in higher education in America that is still in the process.

Secondary School Influences

To understand the scope of Dr. Eliot's influence on American education, we must go beyond the reformation he brought about in higher institutions of learning. His dynamic and compelling personality effected lasting changes in all schools of less than college grade—especially secondary schools. It has already been indicated that Eliot's "New Education" provided for a "broadening and deepening" of the offering of secondary schools.

While it may seem, in light of present developments, that Dr. Eliot's early ideas of "broadening" the secondary school curriculum were rather narrow, we must remember that he was considered by secondary school people of the 80's and 90's, as a "protagonist of change and a radical." At the Washington meeting of the National Education Association in 1888 Eliot delivered an epoch-making address. In it he advocated such reforms as: (1) the reduction of the twelve-grade public school system by two years; (2) greater latitude and flexibility in the organization of instruction and in promotion; (3) more latitude in college entrance requirements and others. This address by Eliot opened a vigorous discussion on secondary school organization that has not yet ended.

During the next two years Dr. Eliot, with the assistance of others, led the agitation for a national conference of secondary education. Out of this movement came the "Committee on Secondary School Studies." This committee is commonly known as the "Committee of Ten." In the reorganization of the Secondary School by National Committees, it is easy to follow the evidence of Dr. Eliot's hand as it shaped the development of curriculum making in the high schools of this country.

It can easily be gathered from Dr.

Eliot's life and works that his influence on American education was neither due to the fact that he was a profound scholar in any given field, nor to the fact that he was an outstanding literary genius. He was neither. He was, however, a careful student of education all of his life. He possessed great ability to win the opposition rather than to force his ideas upon others. He wrote and spoke with great clarity and precision. He was an energetic and tireless worker. After he was eighty years old, he wrote nearly two hundred books and papers. Soon after his eighty-third birthday, I heard Dr. Eliot say: "I am surprised what I am able to accomplish by doing a little work every day."

Dr. Eliot's influence on American education is due to the fact that he selected education as a career. "When a man answers the question, what shall I be?" said Eliot, "It not only determines his sphere of usefulness in this world, it also determines in what direction his own mind shall be developed." Eliot deliberately chose to be an educator—a teacher. He never turned aside from that objective as a means of usefulness in the world. In his *Education for Efficiency*, published in 1909, he reveals his ripened philosophy of education, and shows the place of vocational preparation as a means of developing individual usefulness and social security. He introduces that book with this paragraph: "By efficiency I mean effective power for work and service during a healthy and active life. This effective power every individual man or woman should desire and strive to become possessed of; and to the training and development of this power the education of each and every person should be directed. The efficient nation will be the nation made up, by aggregation, of individuals possessing this effective power; and national education will be effective in proportion as it secures in the masses the development of this power and its application in infinitely various forms to the national industries and the national service."

Association for Sound and Honest Money is Formed

ON February 24, 1933, a group of 400 agricultural leaders, cooperative executives, educators, and farmers met at Syracuse, New York, to form the National Association for Sound and Honest Money. The permanent offices of the Association are at the Onondaga Hotel in Syracuse. Already this movement has spread to many states where interest in the stabilization of the measure of value has been aroused in recent months. Following is a statement of the objects and purposes for which the organization has been formed:

(a) To unite individuals engaged in all lines of endeavor including industry, commerce, agriculture, labor, transportation, finance, and society in general, in a common effort to so reform our monetary system through the application of scientific methods, as to prevent wide and hazardous fluctuations in the purchasing power of the dollar; prevent violent inflation; and to prevent violent deflation causing a collapse in the level of commodity prices which results in business paralysis, unbalanced budgets,

unemployment, bankruptcy, farm foreclosures, loss of homes, and such losses to credit agencies as to endanger or destroy the savings of individuals and public institutions.

(b) To disseminate information, already available through scientific research conducted in America and Great Britain, to the general public, which is fundamental to the welfare of the general public, relating to the effects of fluctuations in value of the monetary unit.

(c) To re-value the dollar, in order to bring commodity prices into proper relationship with the long-time public and private indebtedness and fixed charges of the American people, to the end that such debts may be liquidated honestly in accordance with the intentions of the parties involved in the obligations at the time the obligations were contracted.

(d) To provide an honest exchange for labor, services, and commodities and equitable settlement between debtors and creditors, by using the index numbers of commodity prices as a basis upon which to stabilize the purchasing power of the dollar.

(e) To safeguard the gold standard as the backbone of our monetary system, through the foregoing methods which would make our dollar constant instead of fluctuating in value.

(f) To encourage the calling of an international conference, to consider the remonetization of silver and other world monetary problems.

Personals

MR. Sherman Dickinson has been invited to teach during the first three weeks of the summer session at the University of Hawaii, Honolulu, offering courses in agricultural education emphasizing particularly supervised practice and adult education in agriculture. He expects to leave Los Angeles Harbor on the S. S. Lurline June 16, arriving in Honolulu on the 22nd. The session begins June 26. He will leave Honolulu on the Lurline July 22, thus remaining in the Islands exactly one month. Mrs. Dickinson is accompanying him. Men with whom Dr. Dickinson expects to renew acquaintance are Fred Armstrong, Professor of Agricultural Education, formerly head of the same department at the University of Idaho; Harvey Freeland, Director of Vocational Education, formerly supervisor for trades and industries for Nebraska, and W. W. Beers, Supervisor for Agricultural Education in Hawaii.

Word has come to us that H. M. Bryam of Iowa State College, recently took his final examination for the Ph.D. at Columbia University. We congratulate Dr. Bryam.

Book Review

Plain and Ornamental Forging, Schwarzkopf, John Wiley & Sons, second edition, 1930, pp. 281, price \$2.50 net. Twelve chapters and appendix, well bound, clear print, and good illustrations. A wide field of material, covered with adequate general information. That part of the volume devoted to plain forging is well adapted to the needs of the rural high school instructor.—E. C. Graham.

What To Do About It

SHERMAN DICKINSON, University of Missouri



Sherman Dickinson

TEACHERS of vocational agriculture have under present conditions a greater opportunity for service to farmers than they are likely to meet for years to come.

The rank and file of farm families are in a critical situation, caused largely by the serious discrepancy between the prices of farm commodities and prices of goods which farmers buy. Food stuff prices may serve as an example. Although prices of food materials purchased by farmers have declined 38 per cent since 1929, in the same period prices received at the farm from the sale of grains have declined 62 per cent, meat animals 58 per cent, fruits and vegetables 46 per cent, dairy products 49 per cent, and poultry products 55 per cent. Prices for practically all other commodities such as clothing, machinery, house furnishings, medicines, and entertainment are still on a level which is to the comparative disadvantage of the farmer.

Many pages could be devoted to the present plight of rural folks. The situation should be well known, however, to readers of this article. The balance of the space, therefore, will be given to suggestions as to "what to do about it". This, after all, is the important matter, and to it we must certainly devote our time and energy to the very best advantage. If we do not accept the challenge, we may expect to be on the receiving end for a heavy barrage of criticism that will be very difficult to withstand.

Immediate Action

There are certain practices that farm families may follow which will enable them to live nearly as satisfactorily as formerly but with a much reduced expenditure. That reduced expenditures are imperative is indicated by figures recently released on farm income. In 1929 the balance of farm income left as a return for the operator's capital, labor, and management averaged \$847; in 1930, \$566; in 1931, \$342; probably about \$256 in 1932; with prospects for 1933 about the same.

The Agricultural Outlook for 1933 (U.S.D.A.) offers the following information regarding farm living costs: "Recent studies of farm family living among groups with low money incomes show that from 26 to 41 per cent of total expenditures were devoted to food in different communities; from 14 to 36 per cent to clothing, depending upon the prevailing size of family in the group; * * * from 6 to 19 per cent to house operation; from 2 to 9 per cent to furnishings and equipment; from 2 to 10 per cent to medical care; from 3 to 16 per cent to education, recreation, and community welfare; and from 6 to 19 per cent to miscel-

laneous items." It would thus appear that reduction of cash expenditures for food offers the best possibility in meeting reduced incomes.

Cut Living Costs

There seem to be many possibilities in the various "live at home" proposals which have been suggested with increasing frequency during the past year. Vocational teachers will be wise in stimulating this movement among the farmers of their community. Probably the principal means whereby farmers may cut down expenditures is in the production of garden crops. They have the land, equipment, and labor necessary, and the small cash expenditure for seeds will bring in a larger return on investment than the same amount spent in any other way. Not only will the supply of fresh vegetables materially decrease current food expenditures, but the surplus may be sold for cash or preserved and stored for winter consumption. In addition to the direct saving involved, an improvement in health due to a better diet may be anticipated, thus reducing expenses for medicines and medical attention.

Care of tree and small fruits should be especially encouraged in order that a good yield may be secured for home consumption in both the fresh and preserved forms. Farmers with a surplus of such products over immediate needs should be led to study carefully the comparative desirability of preserving for home use or selling on the market, keeping in mind that what they sell must be replaced with purchased food. In many sections of the country there are available quantities of wild fruits such as blackberries and strawberries which may be had for the picking and which are as nutritive and tasty as cultivated varieties.

Farm Garden Projects

It would seem highly advisable that vocational teachers strongly encourage the inclusion of a farm garden in the supervised practice programs of their students. This could be included as a supplementary minor project and would undoubtedly serve not only to reduce food expenditures for the boy's family but as an example to neighbors. Farm gardens should be promoted thru farmers meetings and the local press, and definite helps provided by means of special garden schools, circular instructions, and individual contacts.

The Future Farmer Chapter might take the responsibility of encouraging and instructing towns people in home gardening, for if the farmers retain their garden products, towns people will either have to raise their own or pay higher prices for fruits and vegetables shipped in. The preservation of surpluses could be encouraged also by providing instruction in curing, drying, canning, and storing practices.

Other practices which teachers might promote include the home slaughtering and curing of meats, especially beef and pork; the increased use of eggs,

poultry, and dairy products; the grinding of wheat at home or exchanging it for flour at the mill. Barter in general should be encouraged, especially as among the farmers themselves, but also as between farmers and merchants. So far as the purchase of gasoline, oils, fertilizers, and similar needs is concerned, much saving is possible through the formation of cooperative buying groups.

Government figures indicate that within the past few years over 2,000,000 persons have left urban centers and settled in the open country. While it is doubtless true that many of these are former "farm families", others have had little experience in farming. Both groups will be in need of help in the form of advice, and the agricultural teacher must be alert to this opportunity. He should note the arrival of such families in the community and be among the first to make their acquaintance and offer assistance. These people are back because of financial stringency, and due to this and their unfamiliarity with the problems of farming, will be in real need of help.

Systematic Instruction

While much of the service rendered by the agriculture teacher at this time will be of an informal nature, it seems evident that conditions are such as to call for expansion in the part-time and evening school programs in vocational agriculture. A few years ago many farm boys of 16 to 25 appeared more interested in leaving the farm than in remaining, and it was therefore somewhat difficult to induce them to enroll for part-time courses. Under existing conditions this attitude has changed so that, with those boys who have returned from the "big city", the vocational teacher may now more readily organize such courses. This opportunity should not be overlooked, for it offers a device not only for service in the present emergency, but such courses once established and operating successfully are quite likely to continue as a regular part of the program.

Continue Teaching

It must not be forgotten at this time that the basic ideas which we have always held in agricultural education are still sound and more important than ever before. Efficiency in production and conservation of farm resources are more than ever necessary if the farmer is to succeed under present conditions. This means that there should be an increase and intensifying of efforts to teach better methods and approved practices through systematic instruction and other means available. The full-time classes in high school should certainly not be neglected. These boys are farmers of the near future and as such must receive adequate preparation, and in addition, there is no question but that they are extremely influential in bringing about improvement of present practices, largely by means of the examples set before the community in the form of

successfully conducted projects.

Evening schools and part-time courses are more necessary than ever before, and the teacher must provide them to meet not only the present emergency but to reduce the likelihood of its recurrence in years to come. It is during times of adversity that people will be interested in any activity that promises a change for the better. Farmers will attend *worth while evening schools* and will continue to attend when "good times" return. Right now is the time for vocational agriculture to make good and be recognized as an activity of permanent value.

Emphasize Projects

In spite of the fact that supervised practice is difficult to initiate, due to financial stringency, such work should be emphasized as much or more than ever before. As a teaching and learning device it is just as important as ever. The truth of this is illustrated by a statement offered by Glen Frank in the January issue of *Agricultural Education*—"* * * we learn by action rather than by absorption. We learn to do by doing rather than by talking about doing. We learn to think by thinking rather than by memorizing what someone else has thought." We are, therefore, still justified in doing all that is possible to secure actual application in practice of the truths discovered in the process of study and class discussion. Initiative and ingenuity will be at a premium in project activities, and modifications must necessarily be made, but teachers must meet the situation with determination. Selection of projects requiring little initial cash outlay, partnership projects, increased proportion of supplementary practice (farm jobs), shifting of emphasis from "financial profit" to "educational profit", share projects, management projects, and other possibilities for meeting the situation will present themselves to the alert vocational teacher. Project plans should be worked out in detail with special care, and project visitation must be thorough in order that successful projects may be assured.

Machinery Repair

Another way whereby the vocational teacher may help to meet the present crisis is in the repair and rejuvenation of farm power and machinery. The purchase of new farm machinery is not possible for many farmers, even though the present equipment may be in extremely unsatisfactory condition. Assistance in the repair of necessary machines will not only save a considerable cash outlay but will increase the efficiency of operation. Here is an opportunity for supervised practice of the most satisfactory kind. Vocational boys will in most cases be glad to include the checking and repairing of the farm's mechanical equipment as a part of their supervised practice program. With the assistance of the teacher, such work can be satisfactorily accomplished.

Farmers whose boys are not enrolled in vocational classes may be reached in at least two ways. First, they may be given actual instruction in the school shop, either daytimes or evenings, just as any program of adult education is

Radio and Vocational Agriculture In Iowa

H. M. BYRAM, Iowa State College

DURING the past two years, the people of Iowa have been learning more about vocational agriculture by way of the radio. Vocational agriculture, students, teachers, superintendent, and state leaders have gone on the air, presenting programs of interest from three Iowa stations, and plans are being formulated with another station.

Radio station W M T, Waterloo, has from 1:00 - 1:15 daily except Sunday set aside as the "R.F.D. Hour". On Mondays, Wednesdays, and Fridays this time is given over to vocational agriculture broadcasts, the other days being taken by Farm Bureau programs. A total of 96 programs on vocational agriculture are being presented from this station this year. Broadcasts are made every Saturday afternoon from W O I at Ames at 1:15, while on Thursday evening 8:00-8:30 from K F N F, Shenandoah, may be heard programs featuring vocational agriculture work. Plans have recently been laid to present programs from K S C J, Sioux City, the first broadcast having been given on January 21, 4:40-4:45. With these centers, four sections of the state are being served—northeastern, central, southwestern, and northwestern.

Although a few programs had been given occasionally from W O I, Ames, previous to 1931-32, the real movement to put Iowa vocational agriculture on the air was started last year when Paul Auringer, instructor at Charles City and president of the Iowa Vocational Agriculture Teachers Club, at the suggestion of G. F. Ekstrom, state supervisor, appointed a committee in the northeast district to work out plans for presenting programs over W M T, Waterloo. Through the cooperation of the committee, a series of programs was scheduled. As a result, 17 weekly presentations were made between March and July. Eleven F. F. A. broadcasts were made from Ames, W O I, and 5 vocational education broadcasts. The success of these programs led three of the other districts of the state to appoint committees which would plan radio broadcasting by the departments

carried out. Smaller implements may be brought to the school shop where tools and facilities are available. With larger machines the bulk of the overhauling must be done on the farm, but broken parts may be removed and brought to the school shop for repair. Second, the class in shop or farm mechanics may issue an invitation to farmers, offering to repair old machines at cost. This work may take the form of a class project (F. F. A. service), or the teacher may assign boys to the jobs.

The "theme song" of this article has been "Stay on the job and use your head". Now if ever, vocational agriculture has the opportunity of proving itself indispensable. If it fails to measure up to its possibilities now—good bye. If it comes across now—its future is safe.

in their regions this year. All three districts are now presenting programs.

There is not much uniformity in the programs, but they are usually aimed to inform the audience of the nature and value of the vocational work. To make such a presentation interesting and at the same time educational, several different types of programs have been worked out. The following are typical presentations.

An instructor describes an evening school course or discusses the subject matter. An instructor and his class demonstrate teaching procedure in some phase of an agriculture course, such as seed treatment, poultry management, dairying, farm shop, or farm management problems. Several boys may describe their supervised practice programs. A superintendent discusses the place of vocational agriculture in the school program. A class project is described by the instructor or students or by both. The state executive secretary of the F. F. A. tells about that organization. An F. F. A. member just returned from the National Congress at Kansas City describes the convention. The state supervisor tells about evening schools. Teacher trainers discuss developments of the program in the state, or phases of the work such as training for leadership. An F. F. A. chapter dramatizes a chapter meeting, showing how a program of work is set up. Oftentimes on the longer programs, such as those at Ames and Shenandoah, musical numbers are combined with discussions or playlets. According to Joe Dumond of the Waterloo station, programs in which more than one individual participates have the greatest interest.

The results of these presentations have been and continue to be more far-reaching than was anticipated when the plans were first inaugurated. At least six worthwhile outcomes are being realized. First, the public in general and prospective vocational agriculture centers in particular are being appraised of the nature and value of the work. Publicity through the press has endeavored to accomplish this for years, but now the radio is being utilized to an equal or greater extent. Comments by those in charge of the stations indicate a growing appreciation of vocational education. One announcer remarked to the audience after a boy had finished a talk on his experiences and plans, that "we would have little to fear for the future of agriculture if it were put in the hands of young men like this."

Second, and perhaps most important for the school putting on the program, is the fact that the people back home learn more about the local program. The home folks invariably listen in when their boys or their neighbors' boys or the instructor speaks over the radio. Instructors say that their local support and interest have grown materially as a result of an increased acquaintance with the good work being done.

Third, other instructors listening in

(Continued on page 167)



Supervised Practice



Supervision of Projects and the Rating of Departments

GEORGE H. KING, Georgia State College of Agriculture



George H. King

AS A PART of the research program in "Determining the Factors in the High and low-Rating Departments of Vocational Agriculture" set up by the Southern Regional Conference in 1931, the amount of time spent in supervising projects and the number of boys supervised by these contrasting groups were studied.

In Georgia there were 23 departments listed as high-rating departments, and 23 departments listed as low-rating. The work of these departments for the year 1930-31 was considered.

In getting at the total number of hours of work per year by the teachers, the following activities were studied.

1. All-day class instruction.
2. Day-unit class instruction.
3. Evening class instruction.
4. Supervision of boys' projects.
5. Organization and follow-up of evening classes.
6. Administration.
7. Extra-curricular activities.
8. Non-vocational subjects.

The median total number of hours devoted to these activities in the high-rating departments was 1,357 as compared with 1,188 hours in the low-rating departments, difference of 169 hours.

In activities dealing with agricultural instruction, the median number of hours spent by the high-rating departments was 1,056 as compared with 835 hours in the low-rating departments, a difference of 221 hours in favor of the high-rating departments.

The greatest difference in any activity was in the number of hours spent by the teacher in the supervision of the boys' projects. The median number of hours spent in this activity by teachers in the high-rating departments was 297 per department as compared with 182 hours for the low-rating departments, a difference of 115 hours.

This is particularly interesting when we compare the number of boys supervised, and know something more of the boys. In the first place, the high-rating departments had more boys to supervise than the low-rating departments, the median number of boys in the high-rating departments being 40 as compared with 31 boys in the low-rating departments. Dividing medians, the teachers in the high-rating departments

spent an average of 7.4 hours per boy in the supervision of projects as compared with 5.8 hours per boy by the teachers in the low-rating departments.

In the next place, the boys in the high-rating departments were more highly selected. In the high-rating departments 76.4 per cent of all farm boys in the high schools were enrolled in the all-day classes in agriculture. In the low-rating departments 90.5 per cent of all of the farm boys in high school were enrolled in the all-day classes. This indicates that the boys in high-rating departments were more highly selected. This is substantiated by the fact that vocational agriculture was required in 11 of the low-rating departments, while only 4 of the high-rating departments were in schools where the subject was required. With more boys to choose from, the high-rating departments were able to have a selected group of boys. The low-rating departments with a smaller number of boys available were forced to make vocational agriculture a required subject or lower the requirements of the course, in order to have a large enrollment or an enrollment large enough to justify the department. In either case, the rating of the department is lowered because the unselected boys cannot be forced to meet the requirements of the course. The thing that suffers is usually the project program. A small project would naturally call for less supervision, and small projects would affect the rating of a department. The accompanying table gives a resume of these facts.

Teachers of high-rating departments

spent more total time in activities, more time in agricultural instruction, and more time in project supervision than did teachers of low-rating departments. However, the greatest difference in any single activity is in the number of hours devoted to the supervision of the boys' projects. In addition to spending more time with boys in the supervision of their projects, the teachers in high-rating departments spent more time per boy and with a more highly selected group of boys.

Practical Livestock Projects

W. J. GROVE, Instructor in Vocational Agriculture, Alleman, Iowa

PERHAPS one benefit which we shall receive from the present economic situation is that we will rid our work of a great deal of "bunk" and sham in the supervised practice program. In most of our communities we have arrived at the place where the average father will not spend any money for something which will not pay. I believe all of us are guilty. I know that I have fostered a number of projects which were nothing but sham and a sort of game for the boys. They had very little connection with real farming. Such a program will, of course, defeat itself.

Very few farmers make money in the show ring. Only a few outstanding breeders make anything, after all expenses are deducted. A few years ago I had the mistaken idea that the boy who won a little money and several ribbons at the local and state shows had a good project. Now I believe that our show ring projects have done more

COMPARISON OF HIGH AND LOW-RATING DEPARTMENTS OF VOCATIONAL AGRICULTURE IN GEORGIA AS TO THE USE OF TIME BY THE TEACHER

ITEMS	High-Rating Departments	Low-Rating Departments	Difference Expressed in Per Cent of Low-Rating Departments
Median number of hours all activities.....	1,367	1,118	14.2
Median number of hours agricultural activities..	1,056	835	26.4
Median number of hours supervision of boys' projects.....	297	182	63.2
Average number hours supervision per boy.....	7.4	5.8	27.6
Per cent of farm boys in high school in all-day classes in agriculture...	76.4	90.5	15.6
Number of schools in which vocational agriculture is compulsory..	4	11

harm than good. Let us make some comparisons:

1. Jack raises 25 chicks for the show, and wins a few ribbons. The chickens were judged on feathers.

Bill gets 500 baby chicks, raises them in a practical way, and carries them into production.

2. Sam buys a purebred sow at a high price, feeds his breeding hogs at high cost, and wins a number of ribbons at the fair. Maybe he still has his boars.

Henry has four market litters which hit the early market and were raised at low cost. He also has charge of his father's hogs, and marketed them before September 20.

3. Albert buys a great-great-granddaughter of K. P. O. P. with no production behind her, and due to the fact that she has a perfect rump and a level back, together with some style, she wins a blue at the Iowa State Fair.

John feeds, tests his father's herd, and helps improve the herd by getting his father to buy a proven sire.

In my opinion it takes very little judgment to decide which type of project will mean most to the average Iowa boy.

I have two boys who finished their work a year ago whose project program will make a good comparison:

No. 1

1930—Purebred sow and litter. Won \$45 at Iowa State Fair, decided to be a showman.

1931—Two purebred sows and litters. Won a number of prizes, but his father's pigs were a bunch of runts. The boy even with his winnings lost money on the project.

1932—Two purebred sows and litters. Won two prizes, but lost some money. His father's hogs were very poor—worms, runts, etc.

No. 2

1930—Two baby beeves; corn.

1931—Corn test plot, 10 acres. Raised all of his father's hogs on clean ground. These sold at six months at an average weight of 246 pounds. Four baby beeves.

1932—Raised father's hogs on clean ground, sold them in September. Had four market litters of his own. Tested soil and put in 30 acres of alfalfa. Had 20 acres of soy beans. Helped his father manage Angus herd, topped the market on a load of baby beeves.

I started both boys. No. 1's winnings the first year made him think he was a purebred breeder, and his project work has been more or less of a "flop." No. 2 has kept his feet on the ground, and has made his father at least \$400 by causing him to change a few methods in raising hogs. In 1930 No. 2's father had a bunch of runts, full of negro and worms. During the past two years he has raised some of the best pigs in the district.

Both of the boys are fine lads, but I started one of them wrong. We have spent considerable time teaching boys how to win ribbons. Let's forget it and teach them *how to farm and to think in terms of farm economics*, so that they can work together instead of competing with each other for a ribbon at the poultry show.

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Where Boys Conduct Their Home Projects

G. A. SCHMIDT, Colorado Agricultural College



G. A. Schmidt

TO train prospective farmers in a farming occupation is the primary aim of the instruction and training in all-day vocational agriculture. It is a generally accepted fact that effective pre-employment vocational education requires instruction in theory and training in the practices of the occupation. No one, I believe, would think much of a vocational training course for house carpenters, for brick-layers, or for auto mechanics if such a course were confined entirely to what goes on in a classroom and omitted all practical work in building houses, in brick laying, or in repairing automobiles.

If our job, as teachers of vocational agriculture, is to give effective training for farming, then that training must include not only classroom instruction but also a great deal of practical work in farming. It appears to the writer that practical work for most types of farming, to be effective, must be given on a farm and should as far as possible concern itself with the production and disposal of agricultural commodities, such as corn, beef, pork, alfalfa, or whatever products are produced in the type of farming for which the vocational agriculture is being offered. The point being made here is that much practical experience in real farming is necessary in order to give effective training for farming.

Good practical experience for most farming occupations can be given only on real farms. The men who framed the Smith-Hughes Act had this idea in mind as is expressed by the following quotation from Section 10 of the Act:—"That in order to receive the benefits of such appropriations (agricultural) . . . schools shall provide for directed or supervised practice in agriculture either on a farm provided for by the school or other farm, for at least six months per year."

Practically all high schools giving

vocational agriculture in all-day classes have no farms and possess no farm land, livestock, farm equipment, or other facilities necessary to give effective practical training in farming. Experience has shown that it is impracticable for high schools to own or rent facilities necessary to give good practical experience in farming; and that it is much more practical, economical, and in many other ways advantageous that those taking vocational agriculture get this practical experience on their home farms under close supervision of their instructor.

In order to discover where boys enrolled in vocational agriculture are actually getting their practical farm experience, the writer recently made a study of the problem. He got his facts directly from nearly one hundred teachers of vocational agriculture located in slightly more than thirty states. These teachers supplied information on 2,177 boys. The accompanying table shows the results of this inquiry.

The fact that 83.8 per cent of the 2,177 boys in this study are getting practical farm experience in the form of home projects on farms speaks well for the type of vocational education in agriculture being given under the provisions of the Smith-Hughes Act.

But what about the rest of the group—the 16.2 per cent not conducting supervised projects on farms? It appears to the writer that vacant lots and backyards in towns are very poor places to acquire practical experience for most types of farming. Furthermore, boys doing no project work, and therefore apparently getting no practical farm experience, are being only partly trained for farming and are getting a very inefficient preparation for farming. Surely, no teacher of agriculture would employ a young man to operate a farm who did not have any practical experience in the management of farm enterprises and who had no training in the skills involved in enterprises of the farming business for which he wanted a young man.

I think that teachers of vocational agriculture are liable at sometime to get into trouble with some of these boys

(Continued on page 176)

DISTRIBUTION OF 2,177 BOYS ENROLLED IN ALL-DAY VOCATIONAL AGRICULTURE ACCORDING TO WHERE THEY CONDUCT THEIR SUPERVISED PROJECT WORK.

School year	On home farm	On farm other than home farm	On vacant lots	On backyards in town	Number having no projects	Number substituting farm experience	Total
First	1,030	70	37	109	51	13	1,310
Second	661	45	28	81	30	8	853
Third	397	22	22	32	9	2	484
Fourth	89	9	1	6	17	3	125
Total	2,177	146	88	228	107	26	2,772



Farm Mechanics



Determining the Content of the Farm Mechanics Course

G. C. COOK, Assistant State Supervisor of Agricultural Education in North Dakota

IMPORTANCE of Proper Course Content—The success or failure of farm mechanics work is largely dependent on the course content. Instructors should consult their state plans for shop work, and spend considerable time in surveying and determining what to include in their shop program. Too frequently, shop is taught without having definite objectives and goals of attainment outlined by the instructor.

Content of the Course—In helping to determine what should be the content of the farm mechanics course, it might be well to ask a few questions:

1. Should toy making be allowed in the shop?
2. Should furniture making be encouraged?
3. Should diminutive models of projects be made?
4. What kind of jobs does the farmer have to do?
5. What should be included in the course?

Toy Making—The average boy who makes toys in the farm mechanics course does so in order that he may amuse himself and "get by" in the course. Instructors permit such work because of the "don't care" idea—anything to keep them busy. Such work is far from being vocational; these are not the skills that should be encouraged and developed in the real farm mechanics work. Instructors should make it clear at the beginning of the year that the shop is not a toy house. The making of small useless articles does more harm than good to the boys, because of the poor habits formed. There may be justification for some repair work on the larger toys.

Furniture Making—How many farmers are going to make furniture for the home? Indeed, few will make elaborate furniture. This is true chiefly because of two reasons; (1) the lack of ability; and (2) the lack of time and equipment. How many women would like to go back to the time when they spun their own linens. Such work is a thing of the past. The same is true of making furniture by hand in the farm mechanics shop. The development of machine-made furniture has long since taken the place of the handicraft method. People do not question the advisability of making a pair of shoes, which would consume hours of tireless labor with a crude product as a result. Why should we expect boys to stand with a saw, plane, and hammer, for hours and hours, working on something that should be done in the modern

manufacturing plants. However, boys should have a general knowledge of planing, sanding, staining, and varnishing because there are many things around the home to construct or repair. The making of such articles as fancy chairs and radio cabinets has no place in the farm mechanics course. This does not mean that the repair of such projects is not practical; often such repair jobs have to be done in the home.

Making of Models—There may be some value in making a model of a poultry house or hog house, and it is generally conceded a good practice to have a few such models to use in classroom teaching. Such models, if properly used, are very fine for such student demonstrations as hog lot sanitation or housing poultry. However, the skills developed are far less beneficial to the boy than those developed from making full-sized projects.

Farm Mechanics Jobs of Farmers.—A few years ago a survey was made in Iowa to determine what farmers want their boys to make in the shop. A questionnaire covering such shop projects as hayracks, wagon boxes, individual hog houses, brooder houses, scoop endgates, farm gates, wash stands, flower boxes, cedar chests, radio cabinets, chairs, tables, hammer handles, etc. was sent out to 500 farmers to fill in and return to the college. When the returns were checked, such projects as individual hog houses, hay racks, brooder houses, and farm gates were far in the majority.

What to Include in the Course—Just what should be included in the farm mechanics course varies in different states and in different schools within the same state. It should include all those elementary jobs with which the farmer may have to deal under actual farm conditions, using the tools that are needed on the farm. The course should be so general that after completing the full course, a boy will be able to do the more common farm mechanics jobs. However, it should not include jobs that require a specialist. The boy should have an appreciation of the fact that some jobs are too difficult for him to undertake, and that such jobs should be taken to the specialist.

The course should be built around the boy's supervised practice work and his home needs. He should gain a fuller appreciation of his home life; he should desire a better equipped farmstead and enjoy a greater margin of profit. If these factors are not considered, the work may not be beneficial to the boy and the home farm. A well-balanced

farm shop course will include the following phases:

1. Classification of tools.
2. Tool sharpening.
3. Farm wood work.
4. Painting.
5. Rope work.
6. Harness work.
7. Sheet metal and soldering.
8. Concrete work.
9. Agriculture sketching.
10. Belt work.
11. Forge work.
12. Farm conveniences (plumbing, heating, water supply, sewage disposal, lighting, etc.)
13. Farm machinery.
14. Tractors, gas engines, and automobiles.

Repair work—This phase of the work has not been stressed as much as it should. Many instructors do not look for repair work, and think that all of their shop work should be the construction of new projects. Under actual conditions, it has been found in several states that at least 50 per cent of the farm mechanics work of the farmer is repair work such as repairing a wagon tongue, harness work, soldering, and machinery repair.

Mechanical Drawing—Some instructors have students sit day after day doing mechanical drawing just because they have had some training in this work, and it is the easiest for them to teach. Students are required to make fancy ink drawings which are very nice it must be admitted, but the student must know how to saw as well as how to draw. Such a procedure will furnish the students with busy work and require very little preparation by the instructor. Farmers do not sit for hours making fancy drawings before starting to build a project. They make a simple drawing, estimate the cost, and start building. Every student should learn the elements of drawing and letter making, and should be required to make a simple pencil drawing of every project before he begins it. He should also be taught to read simple blue prints.

Some Guiding Factors in Setting Up Farm Mechanics Courses:

1. The interests, abilities, and needs of the students.
2. The life, attitude, and needs of the local community.
3. The specific requirements of the vocation for which the students are being trained.
4. The qualifications of the instructor, and the school facilities.

The Importance of Carefully Planning the Farm Mechanics Jobs

R. B. WIDFIELD, Instructor in Vocational Agriculture, LaMoure, North Dakota

ONE of the surest means of securing a successful farm shop program is the thorough planning of every job. Any planning of work ahead of time is beneficial, but the mimeographed job sheet for each student has proved most satisfactory in the vocational agricultural department in La Moure, North Dakota.

The advantages of teaching farm shop by the job sheet are that each student knows exactly what is expected of him, he knows on what basis he will be graded, there is a minimum of lost time, students have more interest in their work, and discipline takes care of itself.

In our system of teaching farm shop there is a job sheet for each unit of work under each shop enterprise for four years of shop work. These job sheets are organized under the headings of job name, assignment, reference, and exercises.

Another advantage of this method of teaching is the satisfactory way in which to allow for varying ability in students. A minimum requirement can be set up for each shop enterprise. This amount of work must be completed satisfactorily for a passing grade. For the students of greater ability, a list of additional projects in each enterprise for work after the minimum requirements are completed gives the instructor an accurate check on these students.

The job sheet method has proved very satisfactory from the standpoint of grading. A grade can be accurately given for each job completed, based on speed, detail, thoroughness, and accuracy. A test on a whole enterprise at completion shows quite well what has been learned.

The writer has successfully taught four different sections in farm shop during the same period, each section taking a different year's work. There is little lost time and confusion, as each boy knows what to do. At present sections in woodworking, farm shop drawing, concrete, soldering, and farm home conveniences are being taught in one period.

Barn Building

LLOYD HAYSCH, Vocational Agriculture Instructor, Roslyn, South Dakota

A PROMINENT dairy farmer of our community had the misfortune of losing his large dairy barn in a fire last fall. The neighbors took it upon themselves to organize a building-bee and help construct a new barn. As all help was welcome, it seemed as though this would be a very good chance for the boys taking third-year agriculture to get some valuable experience in carpentering.

This farm was only 1½ miles from town, so very little time was lost on the road. The class made a number of trips and did a different type of work each time. If it happened that there was not space enough for all the boys to work at the same time, the unoccupied group studied the arrangement

of stalls, bins, stanchions, etc. In this way it was possible to keep all boys busy.

The first job the boys did was to put on drop siding. They got the practice of sawing, matching, fitting, and nailing this material. The next trip was taken when the hay loft was being floored. The floor was constructed of six-inch tongue and grooved flooring. Considerable skill was attained here, especially in notching the flooring to fit the studdings at the gable ends. A great deal was also learned about fitting the flooring without damaging the tongue. The flooring was blind nailed so that none of the nails could be seen.

This barn was of the round-roof type with cut rafters, so some time was spent in studying the construction and merits of the roof. The class helped put on sheathing, and shingled 2,000 square feet of roof. In most cases half of the class laid shingles while the other half nailed, and then they changed jobs.

After the roof was completed, the contractor decided to finish the barn in the spring when the weather would be more favorable. At that time we are going out to help put on lap siding and install the ventilation system. There will also be considerable concrete construction work in the spring, with which we intend to help. This will include laying the cement floor in the stalls, driveway, and gutter.

This barn is 120 x 60 feet. The main barn is in the center, with a lean-to on both sides. It is equipped with stanchions, and the owner plans to put in automatic drinking cups. The silo joins the barn by a small feed way, which makes it a well-arranged structure.

Farm Shop Emphasized in Part-time School

SAM HITCHCOCK, Instructor in Vocational Agriculture, Buffalo, Wyoming

I HAVE conducted part-time schools for four or five years and look forward to each new school with a good deal of pleasure. I believe that the agricultural instructor can be of great service to rural communities through the part-time school.

The recruiting of members for the school can easily be done by personal visits. From my experience, I believe that this is the best method to use.

The subjects for a part-time school can be determined by a survey of the community and by personal talks with the prospects for the school. I believe that farm shop work can be worked in to good advantage in part-time schools, especially in a community where farm shops have been neglected.

In one of my part-time schools in which farm shop was given an important place, the following were taken up: woodworking, blacksmithing, soldering, tool sharpening, care of tools, planning a farm shop, and harness repair. The same plan was followed in teaching as in the all-day classes. Demonstrations were given by the instructor, and then the same jobs were performed by the students.

In woodworking, a project was selected by the instructor which he thought would be interesting to all and which

Making the Farm Mechanics Course Fit Community Needs

CARL G. HOWARD, State Supervisor for Agricultural Education, Wyoming

THIS article cites a few cases where the teacher of vocational agriculture is doing a good job of fitting his work in the farm shop to the needs of his community.

One of the most outstanding adaptations of farm mechanics work to local conditions was discovered in Buffalo, Wyoming, where Mr. Sam Hitchcock's farm mechanics class constructed a pinch chute with an adjustable anchored side, to be used for both calves and larger animals. The materials for the construction of this pinch chute had been hauled out of the mountains by one or two of the boys—their only expense being transportation. Posts and heavy parts of the chute were of native pine and fir logs, while the remainder of the chute was made from material commonly known in Wyoming as Corralpoles. All of the metal parts of the chute were made from re-claimed iron, and all joints were made in such a way that any part of the chute could be easily replaced, since practically all of the joints were mortise and tendon joints.

A rather unusual adaptation was discovered in Gillette, Wyoming, where George W. Beatty had secured 20 or 30 automobiles which had been burned to a greater or less degree in a garage fire. Without any additional expense his shop class took the parts from two or three motors and rebuilt single engines to which they attached universal joints and drive shafts with a view toward providing power for a feed grinder, emory wheel, and other power machinery, in most cases being driven by a belt and pulley from a tractor which costs quite a little more to operate than the re-claimed automobile motor.

Another adaptation meeting a rather widespread use in a number of farm mechanics departments is the construction of two- and four-wheel trailers. This is particularly true in hard times, since it is much more economical to attach a trailer to a passenger car than to use the slower and more expensive truck, on small jobs.

It is within the limits of possibility for any wide-awake teacher of vocational agriculture to make such a careful study of his community that he will be able to adapt his farm mechanics work so that it will train the students in the skills they should develop and at the same time meet a very real need of the farmers and ranchers in the community.

they all could use. This project was a tool cabinet to be placed over a work bench in a farm shop and hold the woodworking tools. It was also planned to allow the students to build anything else in case they did not want to construct this cabinet. As it turned out, all of the students decided to build this particular thing. All cabinets were completed by the end of the school, and each student took the cabinet home with him after paying for the materials used.

(Continued on page 173)



Part-Time Courses



Part-time Courses in Agricultural Education

JULIAN A. McPHEE, Chief, State Bureau of Agricultural Education, California

IN ANY typical California farming community are boys and young men many of whom have made a start in agricultural education through the Smith-Hughes training but are unable, through devious circumstances, to carry through to a chosen goal of scientific agricultural knowledge and farm skills.

Jack Smith, for example, has taken three years of vocational agriculture. He has been carrying a swine project, which has increased to a part-time home enterprise. He also keeps some poultry. He has completed high school, but cannot afford to take further full-time work because of expense and because he is needed on the home ranch. What opportunity has this boy to further his knowledge in livestock production and marketing?

California is meeting this problem through the part-time courses, in which Jack continues his contact with the same instructor, continues to use his home enterprise as a basis for practical knowledge, and adds at each class session, to his knowledge and ability. This work is making Jack a better citizen and a better-trained future producer of agricultural commodities.

At Bakersfield last year 18 young men, many of whom had gone as far as possible in the all-day classes, returned for regular instruction in hog production. Seventeen attended part-time classes in sheep production, and 18 in dairy. Each class session lasted 90 minutes, the boys continued to keep their project records and developed further abilities and assimilated further knowledge in agriculture.

Of equal importance to the added knowledge is the fact that these part-time classes fix more firmly the facts and skills acquired during the enrollment in all-day schools. An obvious reason is that the part-time student is just that much closer to actual farming—some of them are carrying on large-scale enterprises. The factors of efficient farm management, proper and economical rations for livestock and poultry, effects of good or poor orchard or crop practices, and necessity for keeping accurate farm records, are brought home with greater emphasis as the "dollars and cents" side becomes more real.

At Tulare 15 boys attended 75 class sessions in agricultural mechanics. These former students had learned a great deal about the care, repair, and adjustment of farm machinery, construction of buildings and implements, and electrical and concrete work; but when they approached closer to their own operations, they found ample demand for further knowledge along these most practical lines.

A total of 46 boys continued studies

in poultry plan operation and egg production through part-time courses at Chico, Delano, Anderson, Petaluma, and Santa Rosa. Class sessions varied from 10 at Petaluma to 50 at Delano, with a minimum of 90 minutes per class period.

General agriculture courses were continued for this out-of-school group at Riverdale, Ripon, Watsonville, Santa Rosa, and Simi, with a total enrollment of 44 students. Among the other subjects taught in the various schools doing this continuation work were field crops, general livestock, horticulture, farm management, and vegetable gardening. Total enrollment last year was 298 students, with 32 teachers taking part. These men conducted 883 class sessions totaling 1,310 hours of work.

Thus far, only the particular advantages of the strict curricula of vocational agriculture have been considered in valuating these part-time courses. There are other benefits, both to the student and the community, which in the final balancing will certainly equal and perhaps outweigh those of added knowledge and skills in agriculture proper.

These concern participation in the activities of the Future Farmers of America chapter. If this school and community organization of young vocational students has been set up and started functioning on the proper basis, it will have become an important factor in the district in fostering co-operation among its members, promoting community services, regular thrift and savings programs, gatherings to discuss agricultural problems and to hear good speakers, and that final essential of a happy, well-balanced farm group—recreation.

Let us go back to Jack Smith. During high school he has been actively interested in his Future Farmer chapter. He has become accustomed to purchase his grain and mixed feeds through the chapter cooperative, and to sell his pork or his eggs through this group.

If he is a breeder of high quality poultry or livestock, he has made it an educational program to exhibit at county, district, or state fairs in the Future Farmer division, where he can check his birds or animals against the best in the region. He is hardly ready to compete in the unlimited classes at these fairs, yet should not lose interest in this up-grading device; nor should he lose contact with other chapter members who purchase this higher-quality poultry and livestock as foundation birds or animals.

In his Future Farmer chapter he has taken part in many community service functions, such as weed and rodent control campaigns, test plots in grains

and crops, collecting foodstuffs for needy families, assisting in demonstrations for adult and junior groups. He has become accustomed in the chapter thrift program to bank a portion of his project earnings regularly. Perhaps he plays on the Future Farmer basketball or baseball team.

To turn Jack out at the age of 17 or 18 is to lose contact with him. He is at an in-between age, too young for the adult farm organizations, retaining his friendships and his relationships with his school group, anxious to take part in the community life, and eager to continue his agricultural education as long as he is in his minority. If these good effects can be accomplished by bringing Jack and others of similar background into regular classes twice a week or as often as time can be found, education will have gone another step beyond the theoretical and toward the practical application of knowledge and skills—the goals of vocational training.

This, too, works both ways. Not only does the contact with Jack do him a service through all the benefits listed, but Jack's continued interest in the Future Farmer organization and the school agriculture department helps the latter. Greater volume in cooperative purchases and sales is possible. The influence of older boys who have had the advantage of more farming experience increases the efficiency of the chapter. More young man power is available for community service, greater attendance is possible to hear good speakers. If the school and the Future Farmer chapter have a good influence on the boy, or if the boy is adding his abilities to education and farm organization, the contact should be maintained through the part-time classes as long as possible.

Nebraska Boys Put Into Practice Farm Butchering and Curing of Meats

WAYNE B. GIRARDOT, Part-Time Instructor, Albion and Newman Grove, Nebraska

ALL OF THE major objectives of education call for the actual use of knowledge. Facts that have been forgotten cannot be used, therefore, retention must be regarded as a matter of utmost importance and should be stressed.

Good teaching should have, among other aims, these three:

1. To develop interest in the thing taught.
2. To secure clear understanding of it on the part of the students.
3. To incorporate knowledge into the student's system of thought in such a manner that it may be used in his spontaneous thinking.

The problems with which we come in contact in everyday life should be the source towards which our education is directed. Farm butchering and curing of meats is one source of these problems mastered in the part-time school. The goal set up is securing cured meat of quality for use on the farm.

The stage is now set for a lesson in butchering and curing meats. Almost, without exception, every farm boy feels the need for better quality of meat; his natural impulses are aroused, and he is enjoying a certain feeling of suspense which is to lead to permanent interest in the job about to be undertaken.

The live hog is brought into the school shop. One member of the class assigned to the job of keeping records, records the live weight. The hog is bled and emersed in a vat of scalding water, the temperature of which has been recorded by the clerk. The lesson continues through the several stages of scraping, dressing, cooling, and cutting. The instructor supervises the procedure, developing in his students an ability to think well. The clerk assumes the responsibility of obtaining and recording the weights of all parts of the carcass, including blood, hair, viscera, all edible products, and non-edible products. He weighs and records the weights of all the cuts of meat, and computes the dressing per cent of the animal.

The students are now "hungry" for a classroom assignment of estimating the cutting percentages of the carcass and determining what increase in price must be charged for the dressed meat over the live weight.

This method of education marks an advance in the "business of learning" in that it really becomes incorporated in the "system" of the student after his classroom days are over. The ability with which he solves his everyday problems determines whether or not he is educated.

Part-time Schools for Wisconsin Farm Boys

LOUIS M. SASMAN, Supervisor of Vocational Agriculture, Wisconsin

OVER 1,400 farm boys were enrolled in part-time schools in agriculture in 56 centers in Wisconsin during 1931-32. Part-time schools were held in connection with 51 of the 99 departments of vocational agriculture in the state.

According to the 1930 census, Wisconsin had 48,600 boys between the ages of 14-20 out of school and on farms. This was 65.9 per cent of all the farm boys of that age limit in the state. More than 50 per cent of the farm boys between 14-20 were out of school in all of the states of the North Central Region, with the exception of Indiana and Kansas; all of the states of the North Atlantic Region with the exception of New Hampshire and Ohio; all of the states of the Southern Region with the exception of Arkansas, Mississippi and Oklahoma; and three of the states of the Pacific Region. The total for the United States was 1,348,647.

According to the 1932 report of the Federal Board for Vocational Education, there were 10,730 pupils enrolled

that year in part-time courses in agriculture in the United States or about .8 of 1 per cent of the out-of-school group. We have been reaching about 3 per cent of the out-of-school farm boys in Wisconsin, which, of course, is only scratching the surface.

Part-time schools in agriculture in Wisconsin are organized just the same as evening schools, except that they are organized for farm boys instead of for mature farmers. The courses most commonly given last year were feeds and feeding, dairy herd improvement, farm mechanics, and soil improvement, although courses were given in a wide variety of subjects, mostly dealing with technical agriculture, and a few were organized to give training in conducting and participating in community meetings, and two in farm arithmetic.

Fifty of the 56 part-time schools of the state were held at the high school. In this respect they differ from evening schools, for of the 95 evening schools in the state, over 50 were held in rural schools or other centers outside the high schools. A few of the part-time schools are held on Saturdays, but most of them are held in the evening. They usually meet one evening a week and are held between November and April. The number of lessons varied from 10 to 60, the latter being one of the country schools of agriculture. The greatest number of lessons in a part-time school in connection with a high school department was 26.

Of the 1,411 boys enrolled, 1,156 attended at least 30 per cent of the meetings; 855 boys indicated their intention of carrying on some improved practice as a result of their part-time school attendance. This supervised practice included such things as the introduction of alfalfa, growing improved varieties of grain and corn, keeping herd or farm records, using commercial fertilizer, improved orchard management, and practice in the care and repair of farm machinery.

Financial records are not stressed in connection with the supervised practice of part-time pupils in Wisconsin, although where the practice covers a whole enterprise as in poultry management, swine, and dairy herd improvement, complete records are usually required. We do not believe that the educational value of a part-time school or the improved practice resulting can be measured by the financial income on one year's supervised practice. We do believe that farm boys should be taught to keep records so they will know what it actually costs on their farm to produce the various crop and live stock units.

Farm Shop Emphasized in Part-Time Schools

(Continued from page 171)

During the instruction in blacksmithing, the students were taught how to build a forge fire, bend iron, weld iron, temper steel tools, and how to recondition tools. Many tools were brought in by the pupils and reconditioned in the shop. Quite a number of coldchisels and punches were made and tempered by members of the class.

The soldering work consisted of how to solder a hole in tin, put on a patch,

retin a soldering iron, operate a torch, make up a flux of cut acid, and how to repair tin and enamel utensils.

Sharpening of tools consisted of how to sharpen plane, saws, chisels, bit, drill, screwdriver, axe, and knives. The students were asked to bring these tools from home and work on them in the shop.

The planning of a farm shop was considered important, as many of the students had no shops on their farms. Time enough was given to this subject so that it would be possible for each one to plan and build a shop should he so desire.

Many good results came from this school. Two members, brothers, decided to construct a farm shop on their farm. With the aid of the instructor this was done, and \$100 was invested in tools. These two boys now do practically all the repair work of that farm, where before nearly all of it was brought to town.

Some other results were the buying of more tools, rearranging of shops, construction of worth while woodworking projects on the farm, keeping of tools in good repair, making of some of the tools needed on the farm, repairing of utensils, etc.

Results are obtained very quickly from a school of this kind, and instructors who have not tried one should do so as soon as possible. One will be more than pleased with your efforts.

Part-time Work in Baldwin, Wisconsin

HERBERT W. CHAPMAN, Instructor in Agriculture

FOUR years ago when I left school and started a new department at Baldwin in the heart of the finest dairy country in Wisconsin, I found a large field of work ahead of me, as the boys of the community had received no agricultural training. Since that time I have held four part-time schools for farm boys not in high school and three evening schools for adult farmers, which has thrown me in contact with 124 different boys and 112 different farmers. The part-time schools have been held at the high school, while my evening schools were held in the rural communities.

Since dairying is the main source of income to the farmers of this community, the first part-time school was on dairy cattle feeding and management, with an enrollment of 34 farm boys and an average attendance of 21.1.

The following fall, as fall is when it is most convenient to get these boys out, we took up the improving of our crops and soils. At this series of meetings there was an enrollment of 62 farm boys.

Last year, following the erection of a farm mechanics building by my all day students, we took up farm mechanics. At this time we did some repair work and tool sharpening. The enrollment this year decreased to only 32 boys with an average attendance of 21.1. However, there was an advantage in this, as a large group would have been hard to handle in a course of this type.

This year I have just finished taking up farm shop practices with my part-

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Future Farmers of America



The American Farmer Degree

C. H. LANE, National Adviser



C. H. Lane

goal.

As the years go by, each state Association finds itself with an increasing number of "State Farmers" from which to select candidates for the American Farmer degree. It cannot be too strongly urged that only the best prospects should be considered. Competition gets keener each year, and there is a constitutional limit of 75 on the total number of American Farmers which may be selected annually.

A candidate for the degree of American Farmer must have advanced to the levels of "Green Hand", "Future Farmer", and "State Farmer" and must have held the degree of State Farmer in the school year previous to the one in which the American Farmer degree is granted. Individuals who receive this State Farmer degree during the summer and fall of the school year in which the American Farmer degree is granted are not eligible to be candidates for the degree until the fall of the next year. In fact, it is hoped that the time will come when at least an entire school year will have elapsed between the granting of the State and the American Farmer degrees. The fundamental spirit of the organization demands it.

Attention is also called to the fact that a candidate for the degree of American Farmer must be an active member of the F. F. A. This means enrollment in an all-day, day-unit, or part-time class in vocational agriculture. However, according to the constitution, an F. F. A. member may retain his active membership for three years after completing his systematic instruction in vocational agriculture, and so is therefore eligible, during this period, to be nominated by a state for the American Farmer degree.

Immediately following the first of August of each year when the total paid-up F. F. A. membership for the year by states has been officially recorded by

the National Treasurer, each state is notified as to the exact number of candidates for which applications may be submitted. This is based on paid-up membership as of August 1.

Special attention is called to the fact that there is a difference between a state being entitled by certain membership to submit a specified number of candidate applications and the election of these candidates to the American Farmer degree. Each individual's record must measure up to the qualifications for an American Farmer. Each candidate is considered on his merits as revealed in his record. A pony for a project does not carry with it the earmarks of an outstanding supervised practice program, and this is no joke.

All applications should be accompanied by a *complete file* of project plans, records, and accounts, for home project work of the different years, or copies thereof, as supporting evidence on the practice program.

State advisers should "by all means" inspect carefully the home farms of candidates for the degree prior to the filing of the application, noting general appearance, condition, and upkeep. Brief statements covering this item by the state advisers should accompany the application of each candidate.

A "tightening up" of this whole matter on the part of state advisers is greatly needed. The National Board of Trustees is "hard-boiled" but eminently fair.

Activities of the F. F. A's of Canal Winchester, Ohio

L. B. FIDLER, OHIO

PERHAPS the most pleasant event of the year for our F. F. A's, is our project tour and picnic. By starting early in the afternoon, we are able to visit the projects of our members and have a picnic supper in the evening. Boys and their fathers and other interested men of the community make up the party. Supper consists of the contents of the picnic baskets which the mothers have prepared for the occasion. Recreation includes swimming, baseball, horseshoe pitching, and the like.

For the past two years we have taken an educational tour during the summer. Last year the tour took us to 15 counties of the state and to some of the most interesting farming regions. We spent two days on the trip. This year our trip was to the Ohio Agricultural Experiment Station at Wooster, nearly

100 miles away.

Our chief source of chapter income is from our community fair, sponsored and conducted jointly with our home economics department. This fair is held for two days and two evenings during the latter part of October. The main features are agricultural exhibits, home economics exhibits, commercial exhibits. The first evening is devoted to a series of entertainments by the various classes and organizations of the school. The climax is the second evening when various community organizations furnish the entertainment in the form of one-act playlets. Our income is derived from the sale of advertising in our catalog, from the sale of booth space for the commercial exhibits, and from a 10 and 15-cent admission charge to the entertainments. These entertainments attract a crowd of from 700 to 1,000 people each evening. Two years ago each organization netted 90 dollars, and last year the amount was 70 dollars each.

During the second month of school each year, we hold a Green Hand induction ceremony, to which all of the fathers and several other men of the community are invited. After the ceremony, a corn husking contest is held in the farm shop.

Another source of revenue, as well as community service, is through a small rental received from a large ice cream freezer which the chapter owns. During the past summer it was used by 20 different individuals and organizations. The fee received helps to pay for the materials needed occasionally to make a freezer of cream for the chapter.

Like most other chapters in our state, we hold an annual Parent and Son Banquet.

Another pleasant social function is a joint party with the girls of the home economics club. This meeting is usually held at Christmas or Halloween time.

Our largest service project was the re-decorating of our classroom. This room, although pleasantly located and well lighted, was in need of new paint, varnish, and blinds; and the chapter decided that this would be a good place to spend some of the money cleared on the community fair. Accordingly, the walls were painted; the woodwork varnished; and new blinds provided.

Another service project was sponsoring and assisting the local parent

Hundreds of F. F. A. members from the 48 State Associations will make the Pilgrimage to Monticello, National Capital, and Mount Vernon, June 12-14.

teacher organization in landscaping the large school lawn. The actual work of planting was done by the boys.

For the past two years the chapter has exhibited in the F. F. A. Chapter Contest at the Ohio State Fair, winning a total of \$5 dollars in premiums.

Our officers pride themselves on being able to exemplify the Green Hand degree in an impressive way. During the past two years we have inducted green hands for three new chapters in nearby schools, and in addition, gave a demonstration of this degree before the state leadership F. F. A. conference.

Active Chapter at Beaverton, Michigan

JAMES MACCONNELL, instructor at Beaverton, Michigan, writes the special F. F. A. editor as follows:

This is a consolidated school with an enrollment of 470 pupils. We organized our F. F. A. chapter two years ago and now have 37 active members, including 1 State Farmer, 7 Future Farmers, and 29 Green Hands. Our State Farmer is Vice President of the state association.

Our activities have been varied, and our boys are keenly interested in all of them. Following are brief descriptions of some of our major work.

We are located in a district that lends itself well to reforestation, as much of the land in crops is marginal and might better be planted to forest trees. Accordingly, the chapter bought 40 acres of state land under the Michigan Community Forest Act. For this we paid \$1. The land was brushed by the members and plowed in furrows seven feet apart; 18,000 trees were obtained free from the state nursery and planted. To celebrate the event, a Washington Forestry Program was arranged by the boys. Our State Adviser, E. E. Gallup, planted the George Washington tree. On September 5, 96.5 per cent of the trees were growing. The average growth was 4.5 inches. Our records show 300 F. F. A. man-hours with an actual cash outlay of: land, \$1; deed, \$1.25, freight delivery cost \$3—a total of \$5.25.

We have a tour for the boys each year. The last such tour was a trip to Detroit and return—400 miles in all. We visited the Plymouth Motor Car Company, the Detroit Zoological Gardens, Henry Ford's Old Time Village, the Ford Motor Car Company, and the Detroit Live Stock Yards. The cost for two days was 55 cents per student.

Our chapter entertained the rural education classes from Central State Teachers College. The members put on an initiation, and the president told the college students of the work being accomplished. We served a lunch to the students and cleared \$6.25 for our chapter treasury.

The members of the chapter put on a program for the agriculture teachers of the Michigan Teachers Organization at the Saginaw District meeting. Four of the boys appeared on this program and told the agriculture teachers what is being done with reforestation in the state and also described the work we are doing along this line.

Another similar activity was an educational program our boys staged for the "Apple Blossom Club," a rural study

group of students at Central State Teachers College.

Beaverton Chapter took an active part in the retaining of the county agent in Gladwin County in the past fall election. The spring election in various townships showed that the farm population were voting nine to one against retaining the agent. The boys wrote articles for the local paper, printed posters, took the school band to various political meetings; individuals appeared on the programs; students asked uninterested people to vote "yes" on the question. At the fall election there were 700 votes "no" and 1,400 votes "yes." The agricultural agent, Jessie B. Huggett, paid a high tribute to the boys in this quoted statement, "The Beaverton Chapter of the Future Farmers re-elected me."

The chapter sponsored the annual mid-winter fair at Beaverton, held on February 9 and 10. Demonstrations of drenching pigs for round worms, treating seed grains, and treating chickens for internal parasites, were staged by the members.

A monthly paper called "The Future Farmer" is published by the chapter. This paper is sent to every active chapter in Michigan. It carries interesting F. F. A. activities and reading material of general interest to other F. F. A. members. The expense of the publication is \$9 per month, and this is defrayed by advertising solicited by the members.

To help the chapter treasury, the members put on a three-act play, "The White Elephant," on Washington's birthday. Admission charges were 10 and 25 cents. A profit of \$35 was realized.

Last week the chapter purchased a registered Duroc-Jersey boar to breed the 16 registered sow pigs that belong to the boys of the chapter. The boar was paid for by the chapter and sold to one of the members. Service fees will be charged, and the boy will turn \$10 of these fees back into the organization. This will pay the chapter for the money invested, and the boy will have the boar for his own herd.

The chapter also owns a registered Duroc sow. Each new member interested in hogs is given a young pig. He must breed this pig to a registered boar and turn back two 6-week-old pigs as pay for his pig.

As future activities, we plan to attend the next Michigan Junior Farmers Week at East Lansing with the following members: 1 debater, 18 crop judges, 7 livestock judges, 1 candidate for State Farmer, 1 candidate for American Farmer. Incidentally, we have expectations of placing high in the state Best Chapter Contest.

Our plans also include a trip to the World's Fair at Chicago in August 1933, the planting of 18,000 more forest trees this spring, and two forestry programs at other schools during the rest of the school year.

School Fair Sponsored by the F. F. A.

GEORGE O. LETTON,
Adviser, Stanford, Kentucky

THE Stanford F. F. A. chapter sponsored the first school fair ever held at our school, in October 1932. Prizes of over \$50 in cash and approximately

\$135 in merchandise were offered. The chapter secured these prizes from the merchants of the town. A small general admission fee was charged. Appropriate ribbons were awarded to first and second prize winners. Entries were made in 12 departments as follows: Tobacco, corn, vegetables, preserves, canned fruit and vegetables, antiques, dairy, poultry, cakes, candies, rugs and quilts, and school work. A Future Farmer had charge of each department, and was held responsible for entering and checking out the articles exhibited. A fair catalog was put out by the chapter, and over 300 distributed. Advertisements were solicited to pay for the cost of the catalog. A "Future Farmer Booth" was arranged by the local members. This display contained numerous interesting and educational exhibits.

The local members are planning on a bigger and better fair this fall. Considerable interest has been shown in the project, and it has received much favorable comment among the people of the community. As with other F. F. A. activities, it helps to create interest among the boys.

At present, the local chapter is sponsoring a hotbed project. The boys plan to sell plants this spring to bring in some needed funds and in order to make the work more worthwhile.

The president of our local chapter has made a very remarkable achievement in F. F. A. work in our state. This boy, David Pettus, is president of the Kentucky Association of Future Farmers. He was a member of the state champion livestock judging team from our school, holds the State Farmer degree, was winner of the Regional F. F. A. Public Speaking Contest for the North Central states, held at Waterloo, Iowa, in October of 1932, is president of his class, and has made other accomplishments in his work.

Fredericktown, Ohio, Chapter News

Farm Account Contest.—The Knox County Farm Account Contest has been won for the past five years, or ever since it has been started, by the Fredericktown F. F. A. Chapter. In this chapter a total of 39 books have been completed.

Judging Contests.—Last spring the Fredericktown Chapter judging teams placed fifth, or above, in six out of nine contests at the Annual State Judging Contest held at Columbus, and our dairy cattle team won three out of six silver trophy cups at the Toledo Dairy Day Contest.

State Farmer Degrees.—The Fredericktown Chapter has nine State Farmers. This is the largest number in any chapter in the state. We also have one American Farmer, and he was the first State Farmer to receive this honor in Knox County. This boy was the president of the State Association in 1931.

Fair Exhibit.—Last year our boys won the F. F. A. exhibit at the Ohio State Junior Fair. This is the third consecutive time we have had this honor. Individual members of the chapter have won many prizes at our state fair.

F. F. A. Band.—Our Chapter has recently organized a band of 26 members, all F. F. A. boys.

Potato Show.—As a result of several very successful potato projects, we have taken all the prizes in the vocational agriculture class at the Ohio Potato Show, during Farmers' Week, for the past two years.—Paul H. Smith, Reporter, Fredericktown, Ohio.

Pennsylvania Boys Make Money Producing Plants

GREGG Township Chapter, at Spring Mills, Pennsylvania, has carried on several class projects in vegetables in order to raise funds for school purposes. Following is a brief explanation of one of the projects:

The members constructed a concrete hotbed 30 x 6 feet in which they grow each spring early cabbage, celery, cauliflower, and tomato plants. The hotbed is managed by the class in gardening. The returns range from \$20 to \$60 annually. The hotbed is started the last week in February and kept in use until May 30. The chapter also has two cold frames that help out during the rush season. The price charged per dozen are: cabbage, 15 cents; tomato, 25 cents; celery, 15 cents; cauliflower, 15 cents.—J. W. Decker, Instructor.

An Exchange Department

About a year ago an exchange department was organized by the Oshkosh Chapter, Wisconsin, for the purpose of exchanging products in the agriculture department. It was started with the idea of selling grains, etc., that were grown in the department. There was such a call for other products that we bought large quantities of commercial fertilizers, spraying materials, Black Leaf '40', disinfectants, lawn seeding, seed potatoes, and miscellaneous articles. By buying these in fairly large quantities, we were able to obtain them at a much lower cost than the merchants of the town could sell them in small quantities, and thus realized a saving for those buying these items. Whenever anyone has anything for sale, he places a sign on the bulletin board, stating the nature of the item for sale. A sign is also placed here if anyone wishes to buy items within reach of the Exchange department.

F. F. A. Book Store

THE Strong Chapter of the F. F. A. had reached the point where something had to be done to raise money for carrying on the activities of the Chapter. With the advice and assistance of our agriculture teacher and principal we worked out the idea of a school book store. The principal gave us a room in the basement of our new school building for our book store. We found a company that would sell us school supplies on time at a very reasonable price. We are carrying a regular supply of note book paper, pencils, ink, tablets, etc. One boy has charge of the store for one week. At the end of the week a complete inventory is made, and every item must check.

We hope to secure enough money from this source to go our part in a county F. F. A. cabin to be constructed at Couchdale on Lake Catherine next summer.—Hubert Stegall, Reporter.—Arkansas Visitor.

Agricultural Bulletins

Beef-Cattle Production in the Range Area. Revised January, 1933. (Farmers' Bulletin 1395.)

Dairy Farming for Beginners. Revised January, 1933. (Farmers' Bulletin 1610.)

Determining the Age of Cattle by the Teeth. Revised. (Farmers' Bulletin 1066.)

The Sheep Tick and Its Eradication by Dipping. Revised December, 1932. (Farmers' Bulletin 798.)

The Angora Goat. Revised November, 1932. (Farmers' Bulletin 1203.)

Marketing Eggs. Revised November, 1932. (Farmers' Bulletin 1378.)

Sweetpotato Growing. Revised December, 1932. (Farmers' Bulletin 999.)

How to Detect Outbreaks of Insects and Save the Grain Crops. Revised November, 1932. Farmers Bulletin 835.)

Simple Way to Increase Crop Yields. Revised. (Farmers' Bulletin 924.)

Using Soil-Binding Plants to Reclaim Gullies in the South. (Farmers' Bulletin 1697.)

Preparing Apples for Market in Barrels and Baskets. 1933. (Farmers' Bulletin 1695.)

Deciduous-Fruit Improvement through Tree-Performance Records. 1933. (Farmers' Bulletin 1696.)

Peach Brown Rot. November, 1932. (Technical Bulletin 328.)

Currants and Gooseberries, Their Culture and Relation to White-Pine Blister Rust. 1933. (Farmers' Bulletin 1398.)

Strawberry Culture: South Atlantic and Gulf Coast Regions. Revised (Farmers' Bulletin 1026.)

Strawberry Culture: Western United States. Revised 1933. (Farmers' Bulletin 1027.)

Blackberry Growing. Revised December, 1932. (Farmers' Bulletin 1399.)

Making Woodlands Profitable in the Southern States. Revised December, 1932. (Farmers' Bulletin 1071.)

Radio and Vocational Agriculture in Iowa

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learn of the progressive projects which their neighboring teachers are directing, and develop a larger group consciousness as a result of working together with other instructors in a common cause.

In the fourth place, in deciding on what to present, each instructor must evaluate his own program, decide what its most important phases are, what he is doing best, and what his patrons and the general public will be most interested in hearing about.

Fifth, not only are instructors becoming better acquainted with the nature of the vocational agriculture programs in other departments, but so are the students. Students develop an awareness of their own position in a large achievements of other boys in similar work.

Lastly, this broadcasting experience is excellent training in written and oral expression. Although the station managers exercise no editorial or inspectorial

functions over the presentations, the talks or dramatizations are invariably written and rehearsed before being presented. The men and boys realize that they have only a few minutes to present their messages. The manuscripts must be carefully constructed, the vocabulary must be suitable, and the English impeccable.

It may be that the experience which students get in preparing for and giving radio presentations may prove to be a valuable preparation for their future activities as leaders of a better rural life.

Where Boys Conduct Their Home Projects

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if the only practical farm experience they are giving them is in back-yards and on vacant lots. I deduct this anticipated trouble from the following newspaper clipping.

DIFFERENCE IN METALS LEADS TO JAIL

Pair Say They Paid to Learn Steel Welding Taught With Tin

Difference between structural steel and tin of the tomato can variety is the reason why William R. Baudette, 5150 Ogden Street, went to jail yesterday.

Baudette, it is charged, accepted fees in return for instructing two Denver men in structural steel welding. Instead, his training was limited to showing his pupils how to make small articles from tin, they asserted.

E. H. Greeder, 1055 Clarkson Street, and Charles Ewert, 760 Pennsylvania Street, paid Baudette \$75.00 and \$40.00 respectively, for instruction in steel work, they asserted. When they found, they said, that the course was confined to tin craftsmanship, they swore out a warrant in justice of the peace court against Baudette.

He is facing charges of operating a confidence game.

Part-time Work in Baldwin, Wisconsin

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time group. This course has been an outgrowth of what we had last year. The work has been entirely on an individual basis, each boy working on what he wanted to. The enrollment has been large with 47 enrolled and an average attendance of 30. The boys work in groups, doing a large variety of shop jobs. The work has covered tool sharpening, soldering, blacksmithing, harness repairing and oiling, gas engine repair, machine repairing, rope splicing, and knot tying and belt lacing.

I have found that by meeting the group twice a week the interest runs higher, and we are through before bad roads and bad weather starts.

I have had an average of 42 farm boys regularly enrolled in my all-day classes, but I find that I have made contact with just as many boys not attending high school through part-time classes.

